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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,152	03/16/2004	Kenjiro Mihara	36856.1232	2190

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EXAMINER
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EASTHOM, KARL D

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/801,152

Applicant(s)

MIHARA ET AL.

Examiner

Karl D Easthom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-20 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/16/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 3-9, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mihara et al. (JP 6-208903). Mihara discloses the claimed invention at Fig. 1-4 with thermistor layers 2, first and second external electrodes 5, first and second internal electrodes 3 and the non-heating portions the opening or cut portions 6 approximately in the center in the lamination direction. In claim 3, no electrodes are provided at the window or gaps 57a. In claims 4-5, the gap is an opening or cut, where the cut is a process limitation not deemed to create a distinct product since the opening exists in the final product. In claim 6, the cavity in the center between the two devices is a substantially rectangular. In claim 7, there are several windows or non-heating portions as noted above. In claims 8-9, the windows or cavities deemed in the laminate since the electrodes are not excluded as part of the laminate. For an

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alternative interpretation, see the rejection below. The openings are non-heating areas as claimed. Claims 16-19 follow from the elements noted above.

3. Claims 1, 3-9, and 16-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwao et al. Iwao discloses the claimed invention at Fig. 16s-16b with thermistor layers 51, first and second external electrodes 53a, 53b first and second internal electrodes 54a-d and the non-heating portion either the gaps 57a located approximately in the center in the lamination direction. In claim 3, no electrodes are provided at the window or gaps 57a. In claims 3-5 and 7, the gap is an opening or cut. In claim 6, the cavity in the center between the two devices is a substantially rectangular. In claim 7, there are two insulation layers and one space or gap as noted above. In claims 8-9, the windows or cavities deemed in the laminate since the electrodes are not excluded in the claim from the laminate. For an alternative interpretation, see the rejection below. The openings are non-heating areas as claimed. Claims 16-19 follow from the elements noted above.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 8-9 and 10-11, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwao et al. or Mihara et al. (JP 6-208903) in view of Kawachi (JP-3-208301), Strumpler. Mihara or Iwao discloses the claimed invention as noted above except the cavity. For claims 8-9, the cavity in the laminate is interpreted as in the thermistor layer portion.

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Kawachi discloses employing holes all the way through a thermistor layer to provide for reduced thermal distortion and high heat dissipation rendering the modification obvious for that reason. Strumpler also discloses cavities 9 at the abstract through a PTC device such as that of Iwao or Mihara to produce a device capable of handling more current so that such a modification would have been obvious for any of the layers. For claims 9, 13 and 15, the shapes are substantially as claimed such as polygonal or rectangular. (Strumpler does not apply for claim 11). For claim 14, the openings are suggested for any of the layers, so that some would be in the center.


6. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Primarily, there is no suggestion in the claimed combination for the electrode opening connected to the cavity.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom  
Primary Examiner  
Art Unit 2832

KDE